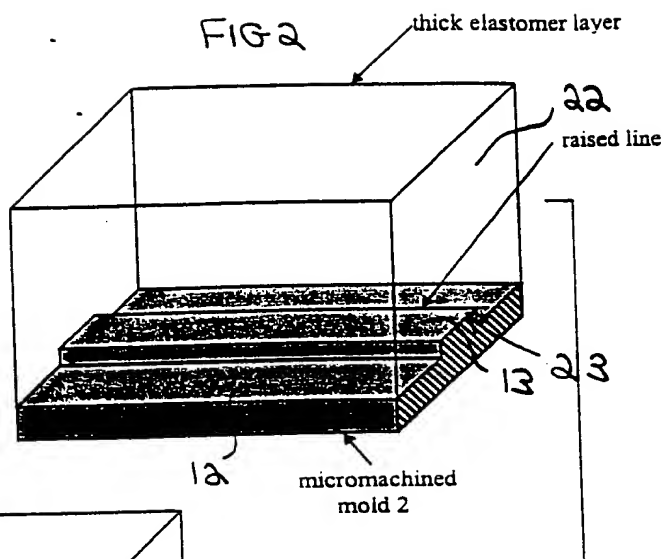
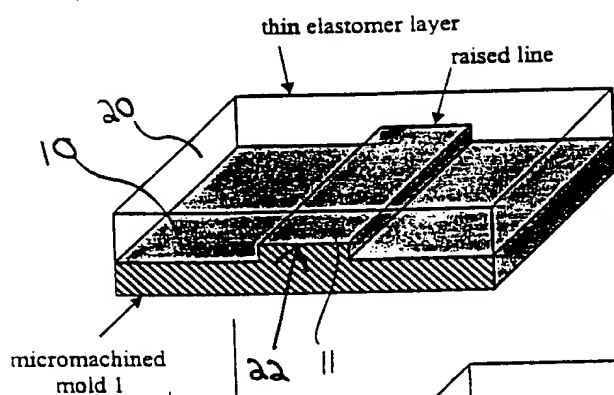
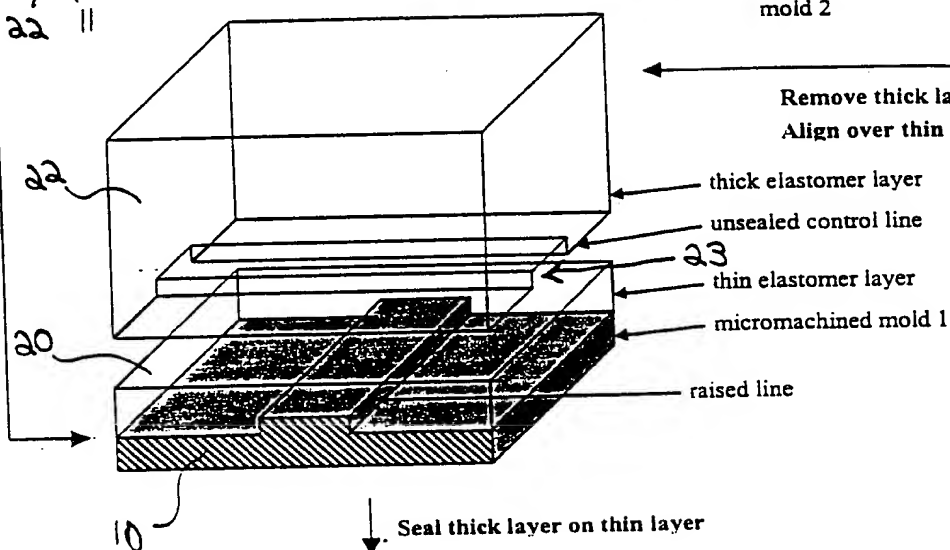


### Figure 1

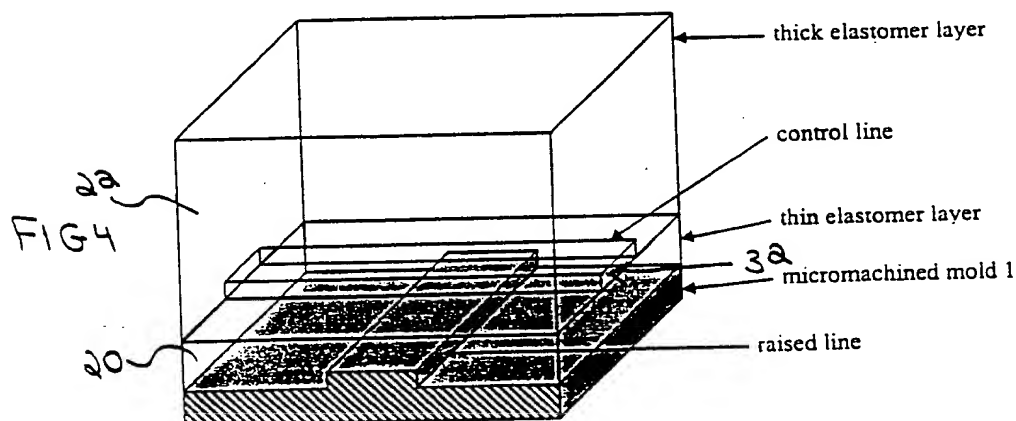


**Remove thick layer from mold**  
**Align over thin layer**

FIG 3



### Seal thick layer on thin layer



### Bond elastomer layers

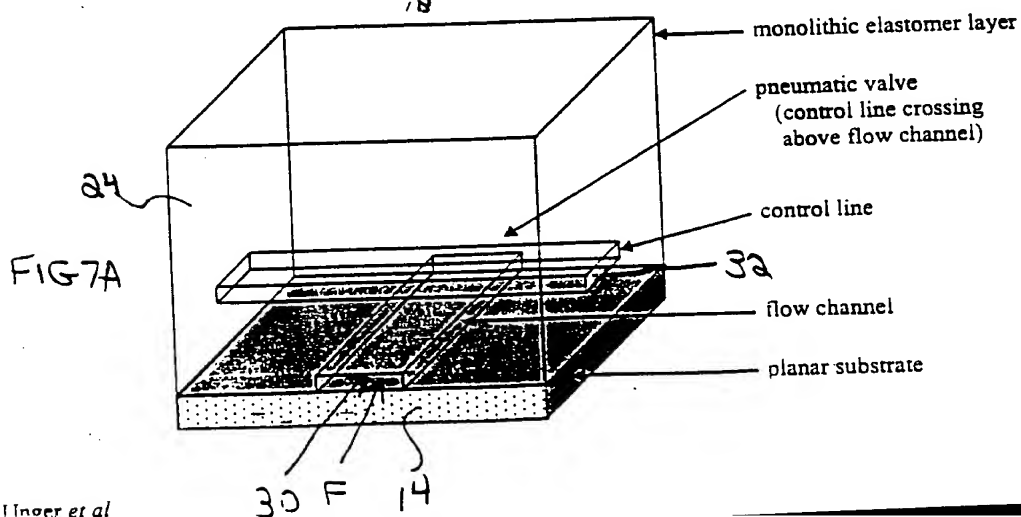
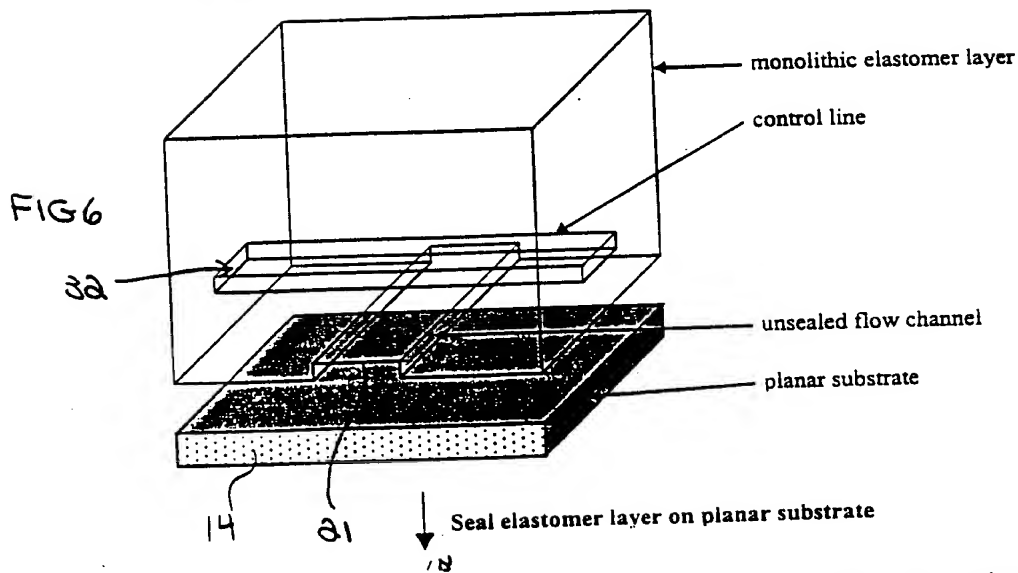
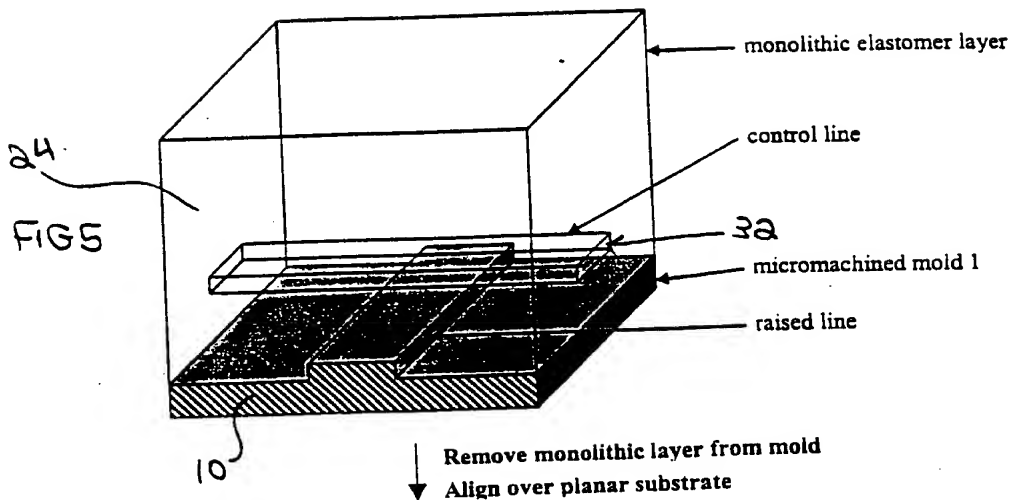


FIG 7B

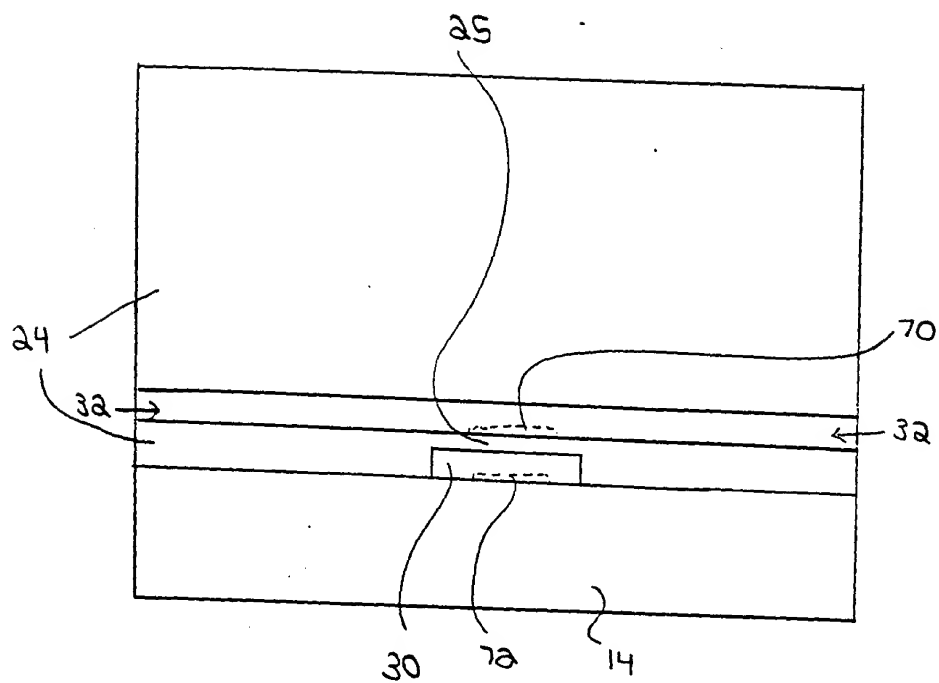


FIG 7E

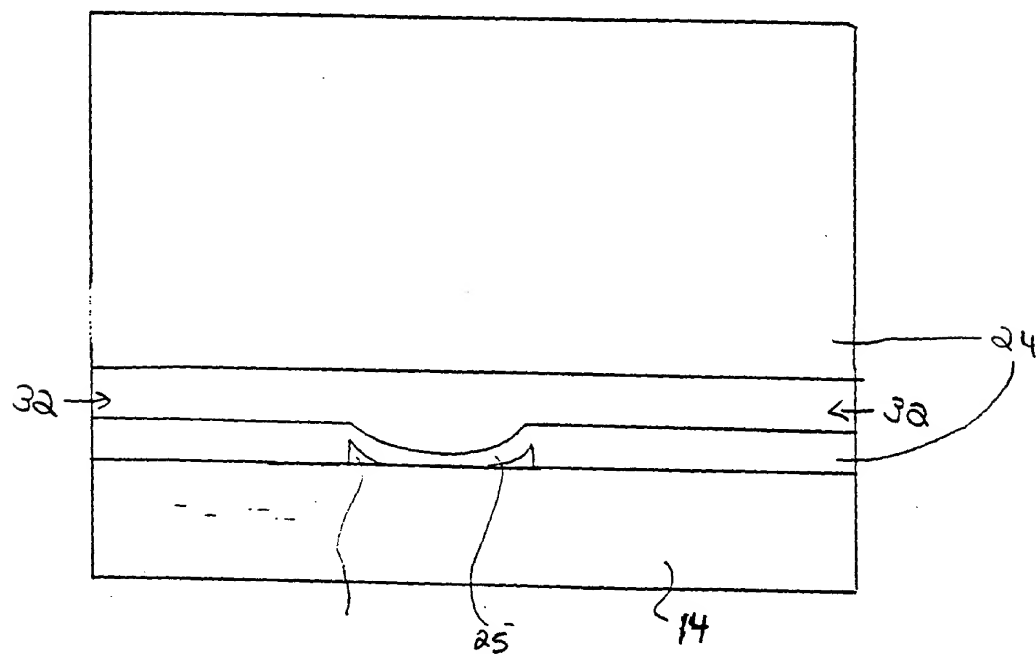
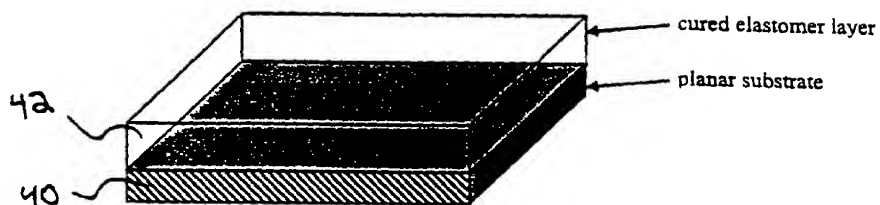
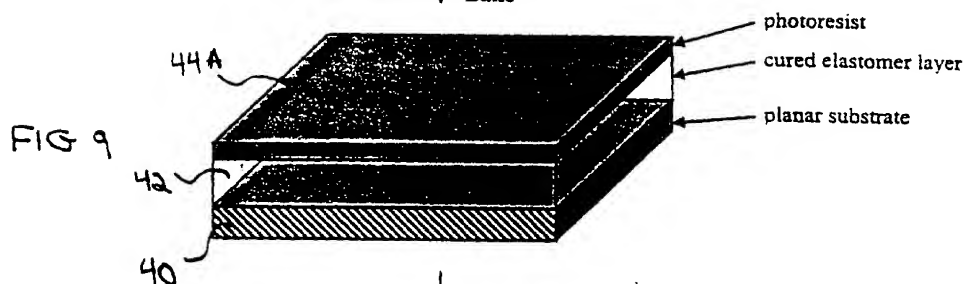


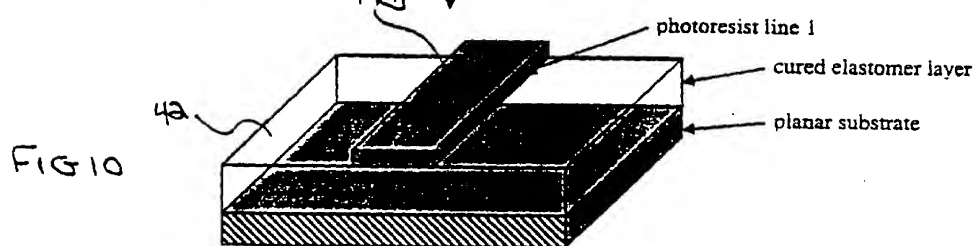
Figure 8



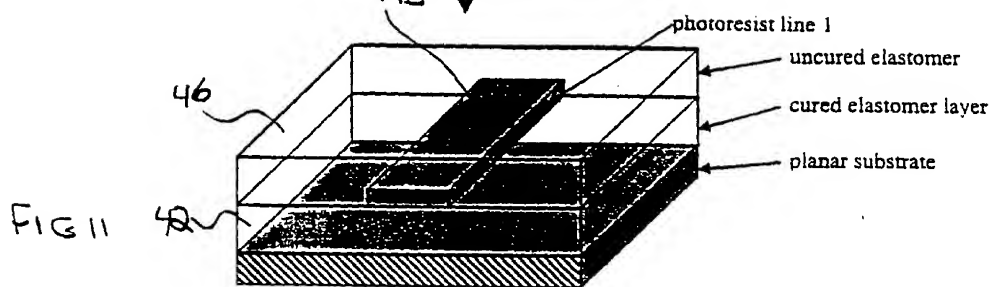
Spincoat photoresist  
Bake



Pattern photoresist (expose, develop)

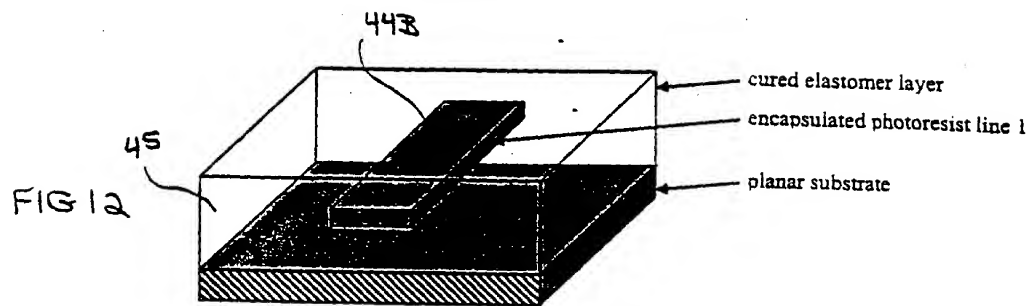


Spincoat elastomer

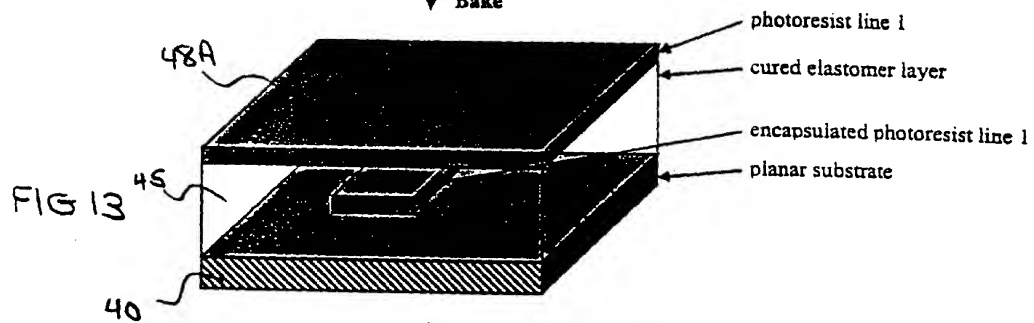


Cure elastomer

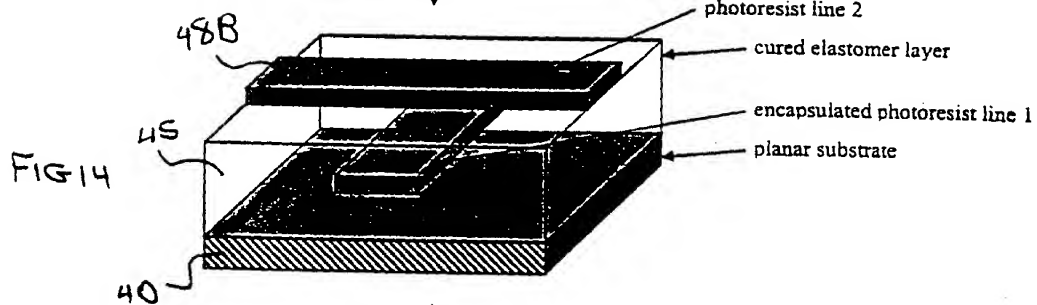
009077 2220260



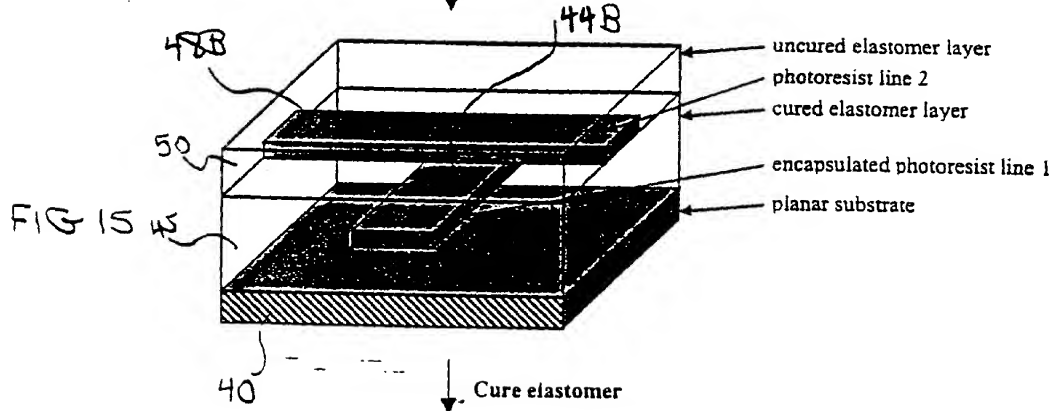
Spincoat photoresist  
↓  
Bake



↓  
Pattern photoresist

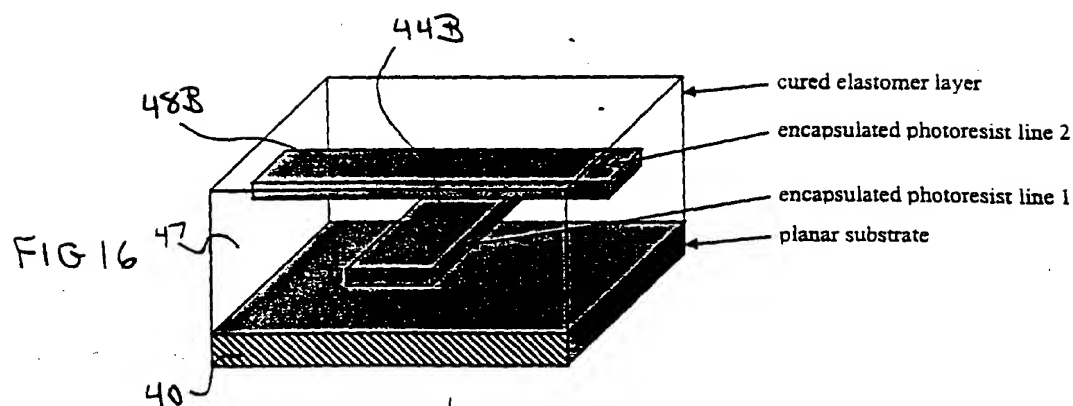


↓  
Spincoat elastomer

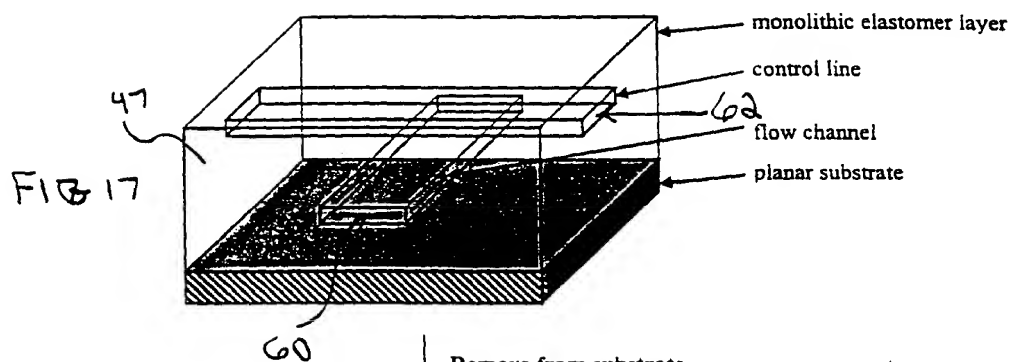


↓  
Cure elastomer

00907-2240280



↓ Dissolve photoresist



↓ Remove from substrate

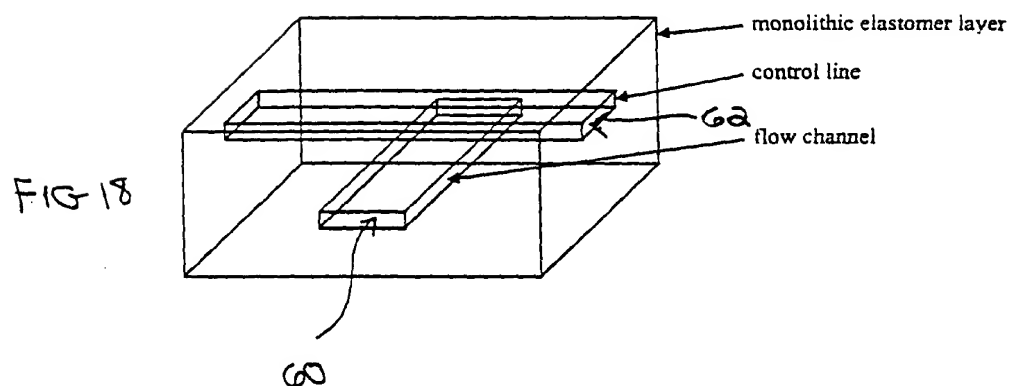
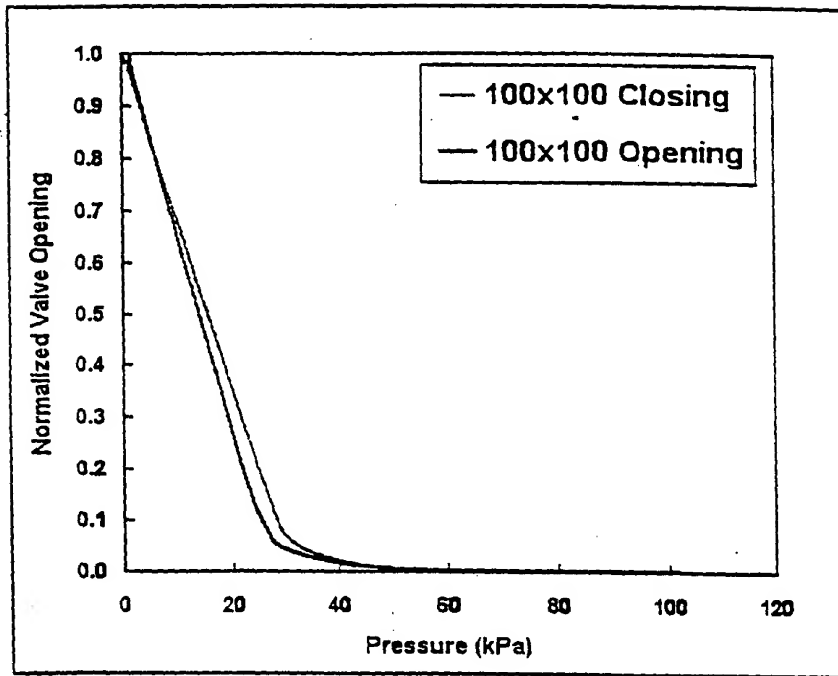
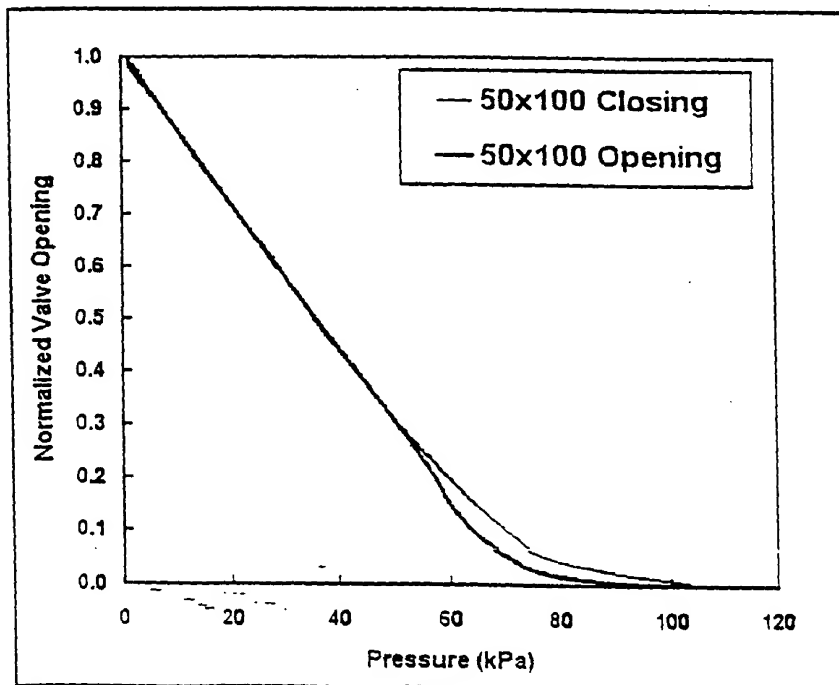


FIG 19



(a).



(b).

0090TF 2220250

009014E220260

Fig 20

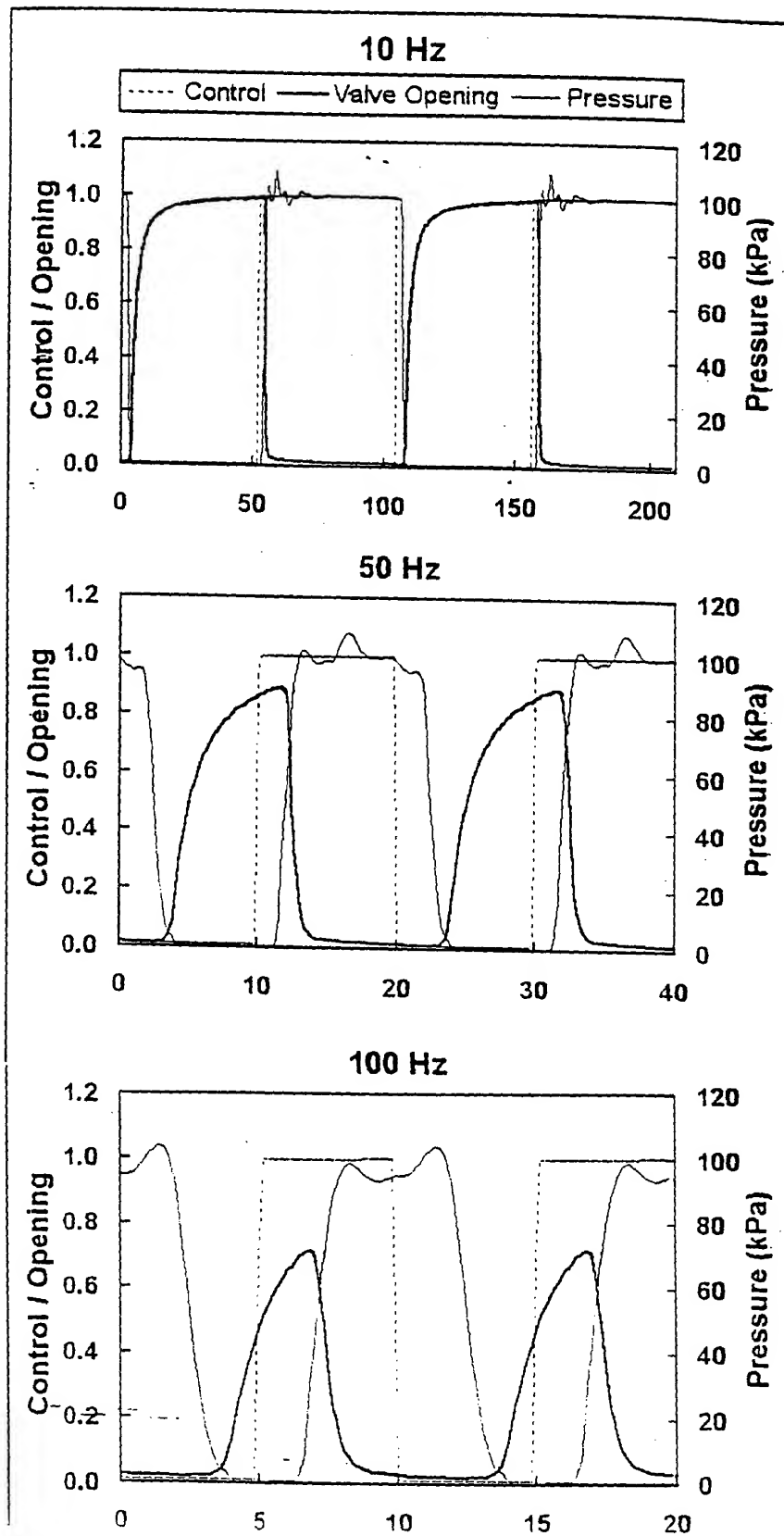
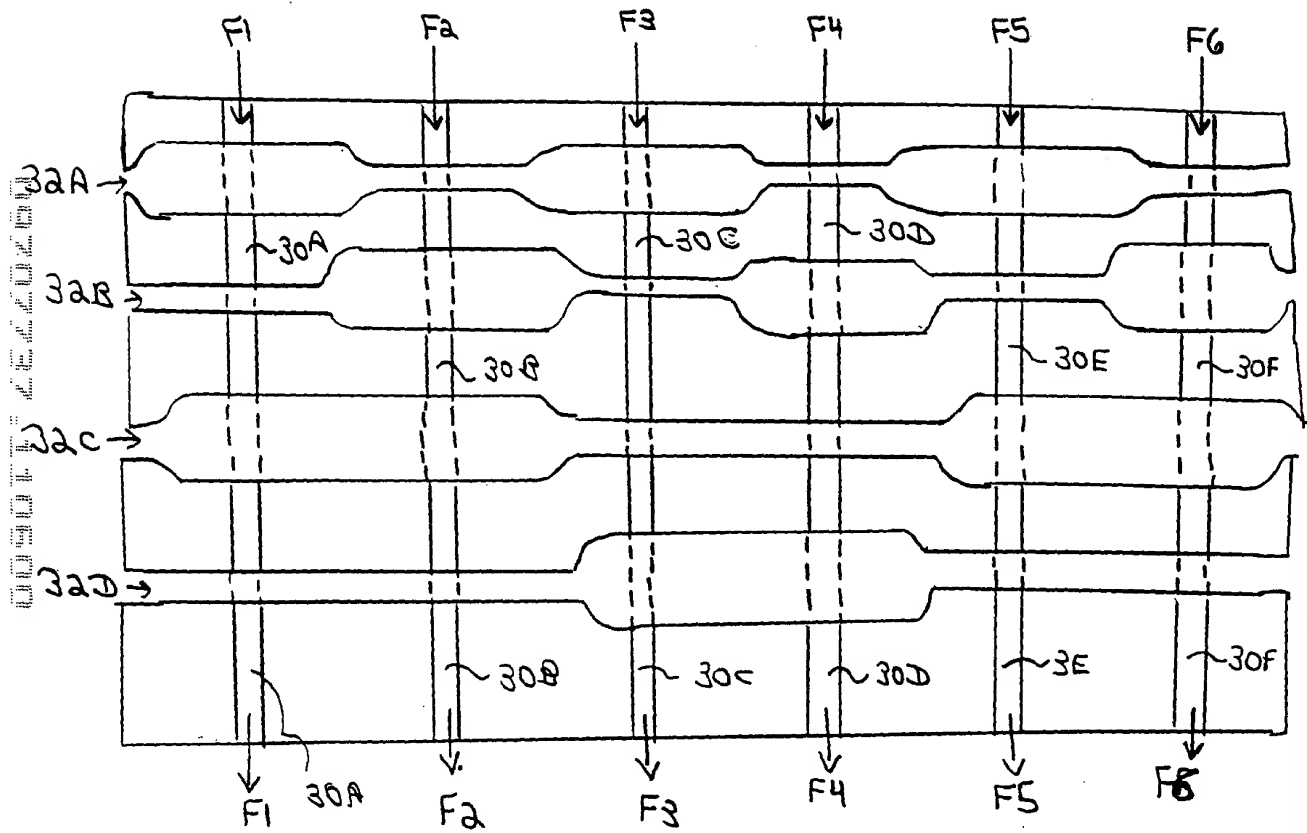




FIG. 21



009044 22202600

FIG 22A

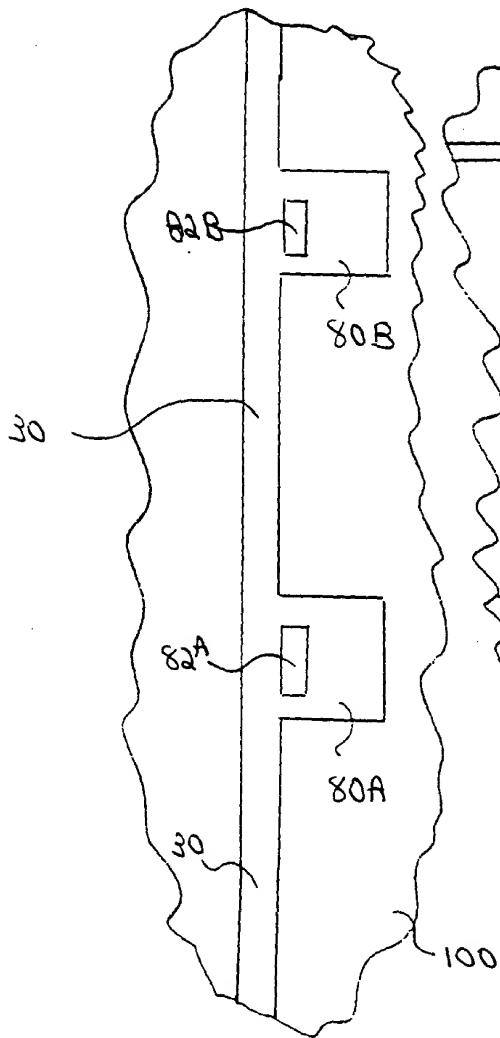
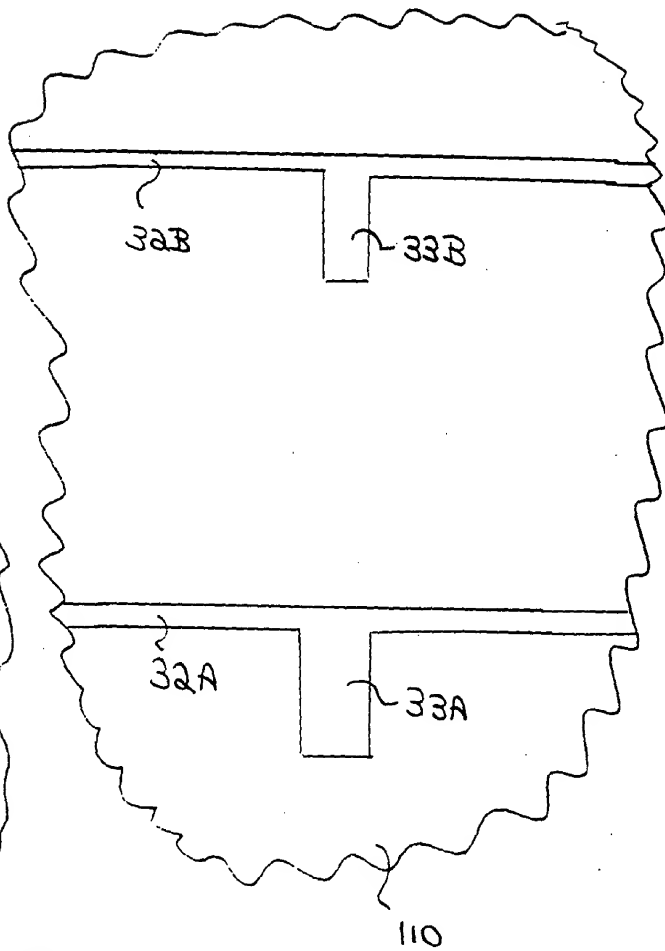


FIG 22B



00901-2220200

FIG 22C

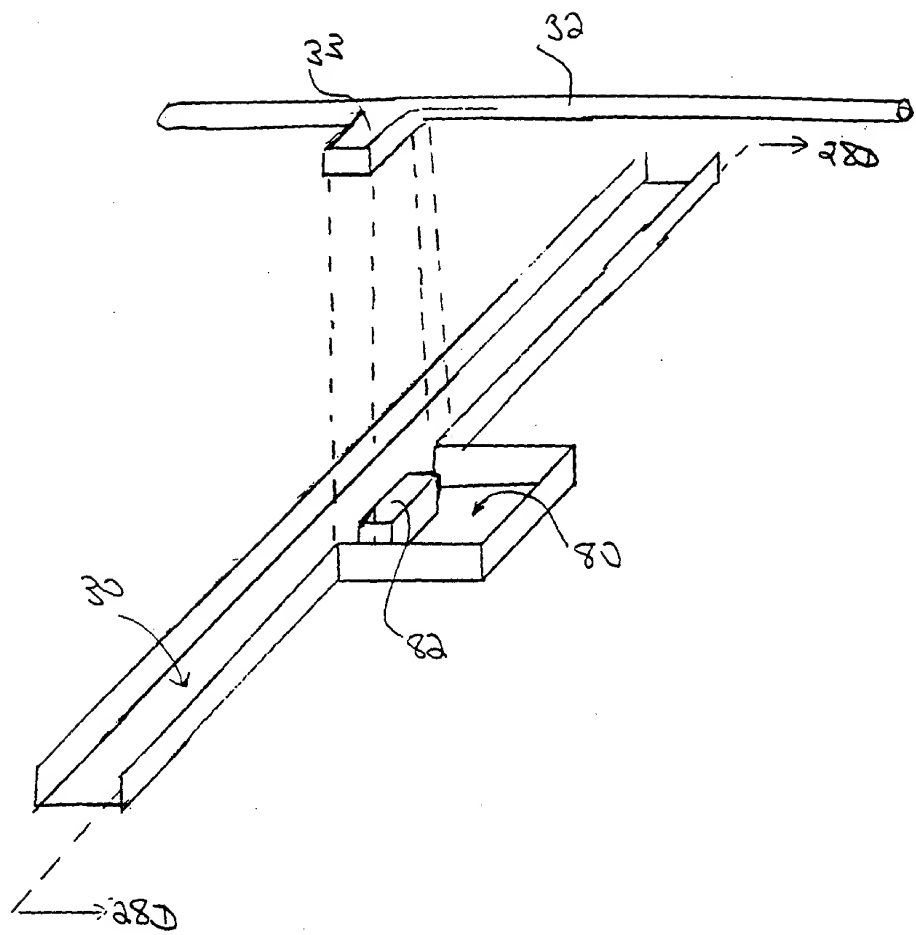
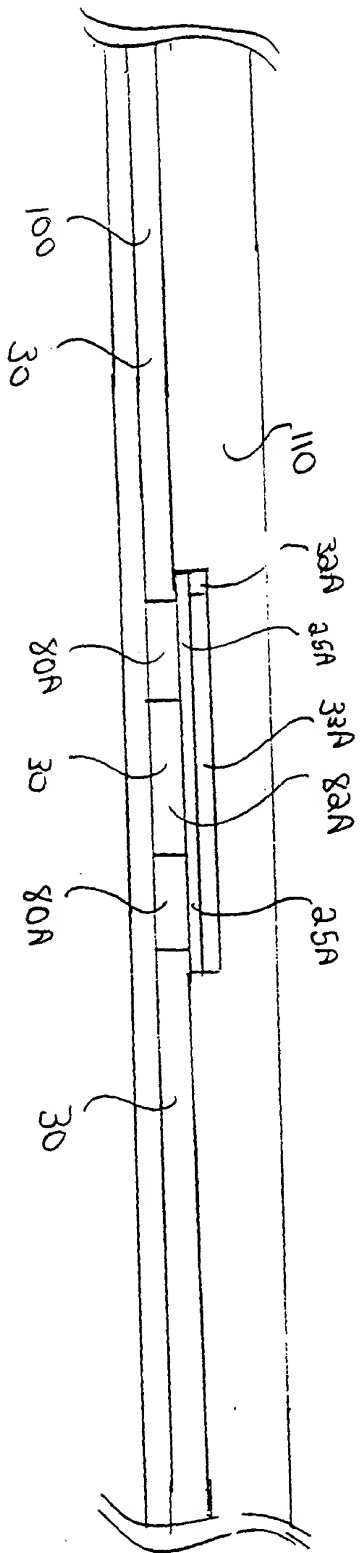


FIG 22D



06207737-440600

009016 2E20200

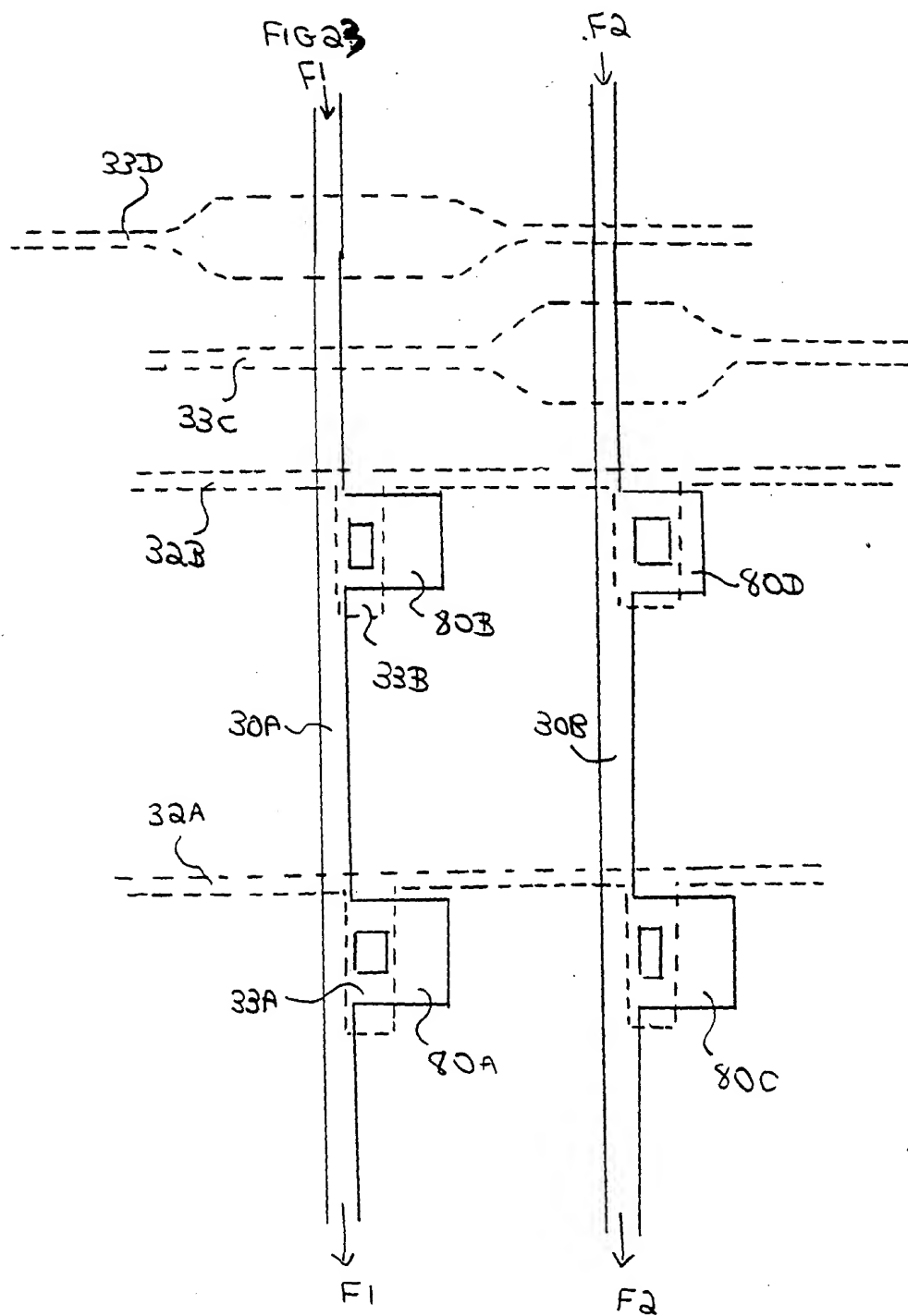
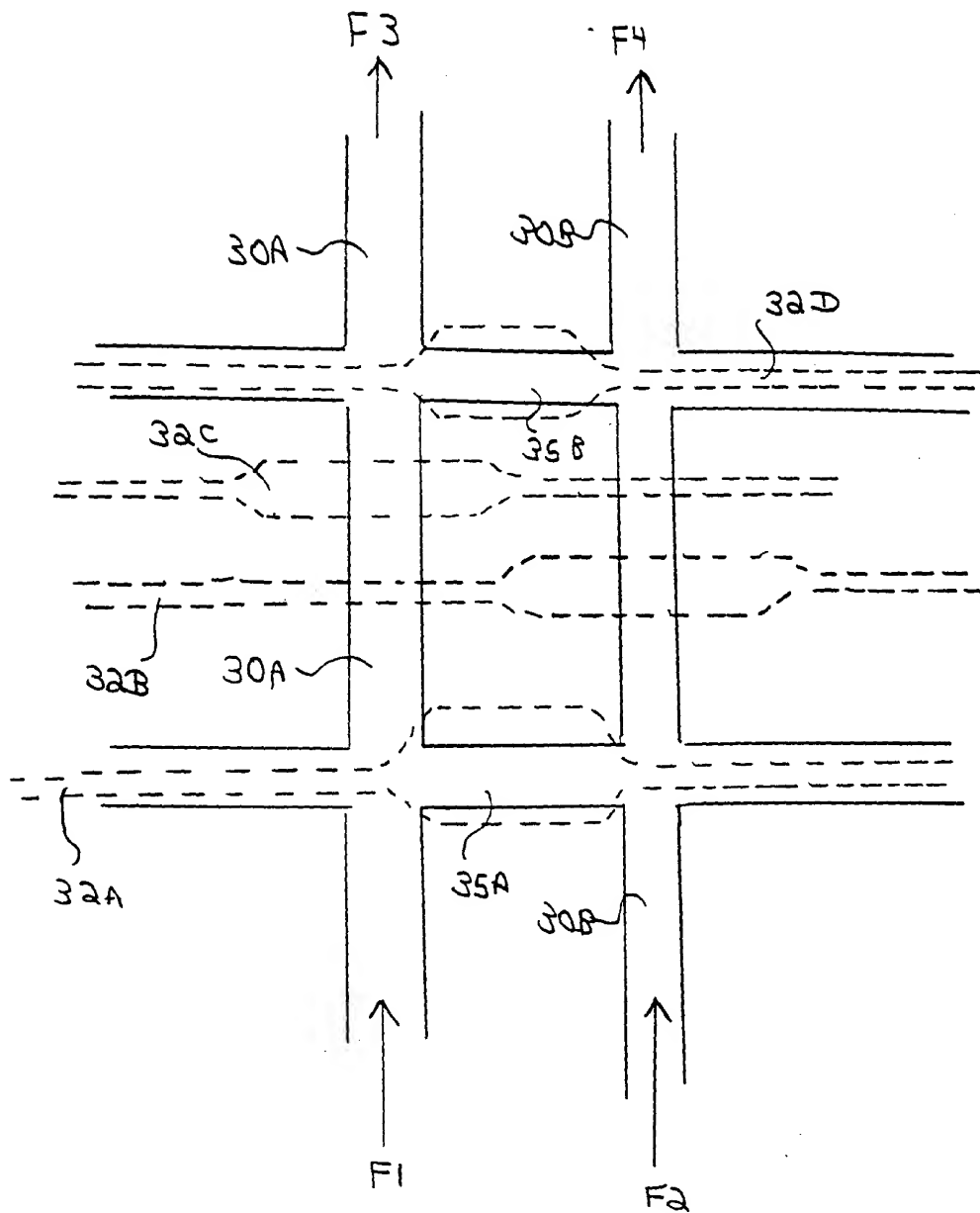
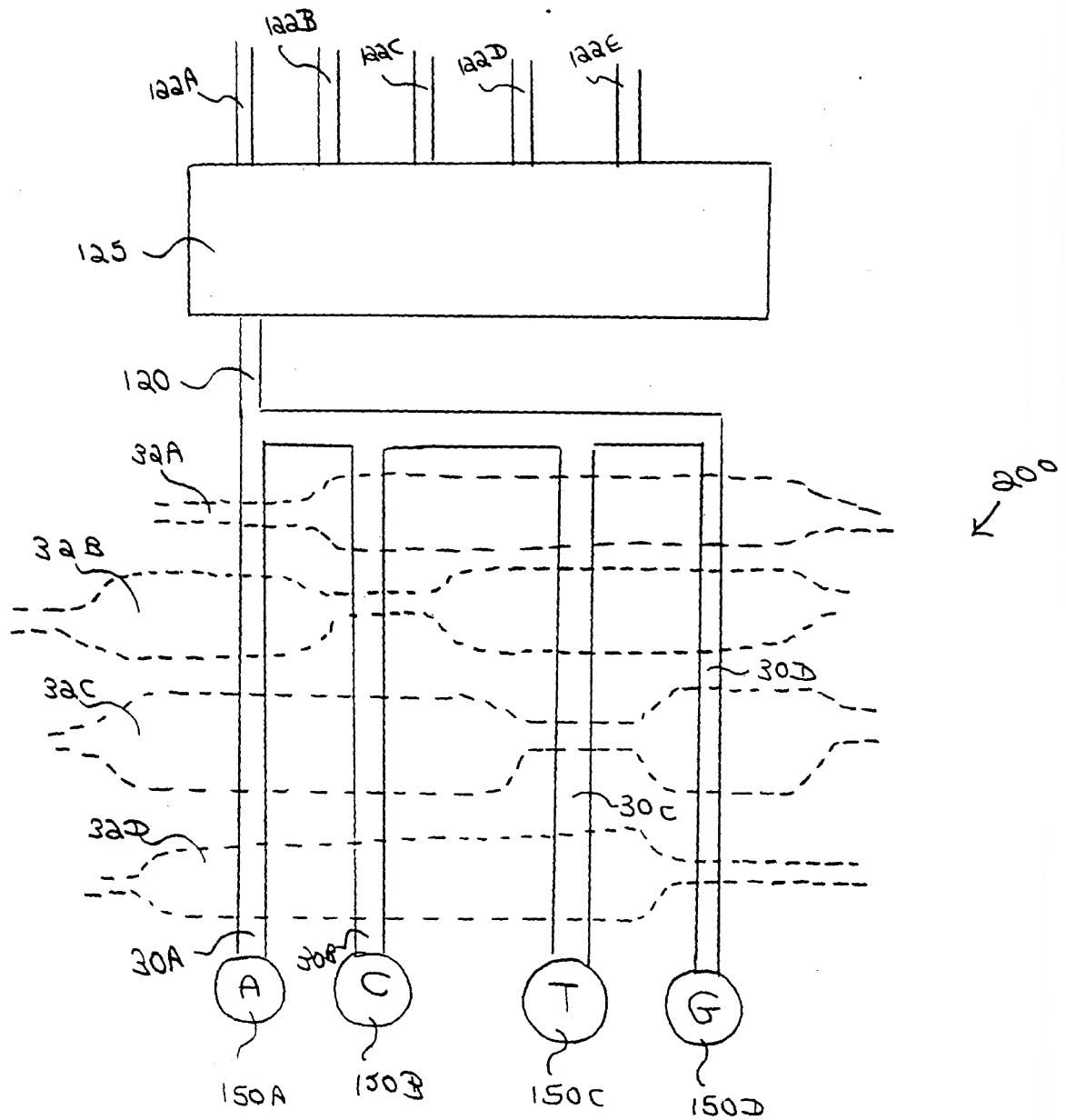


FIG 24



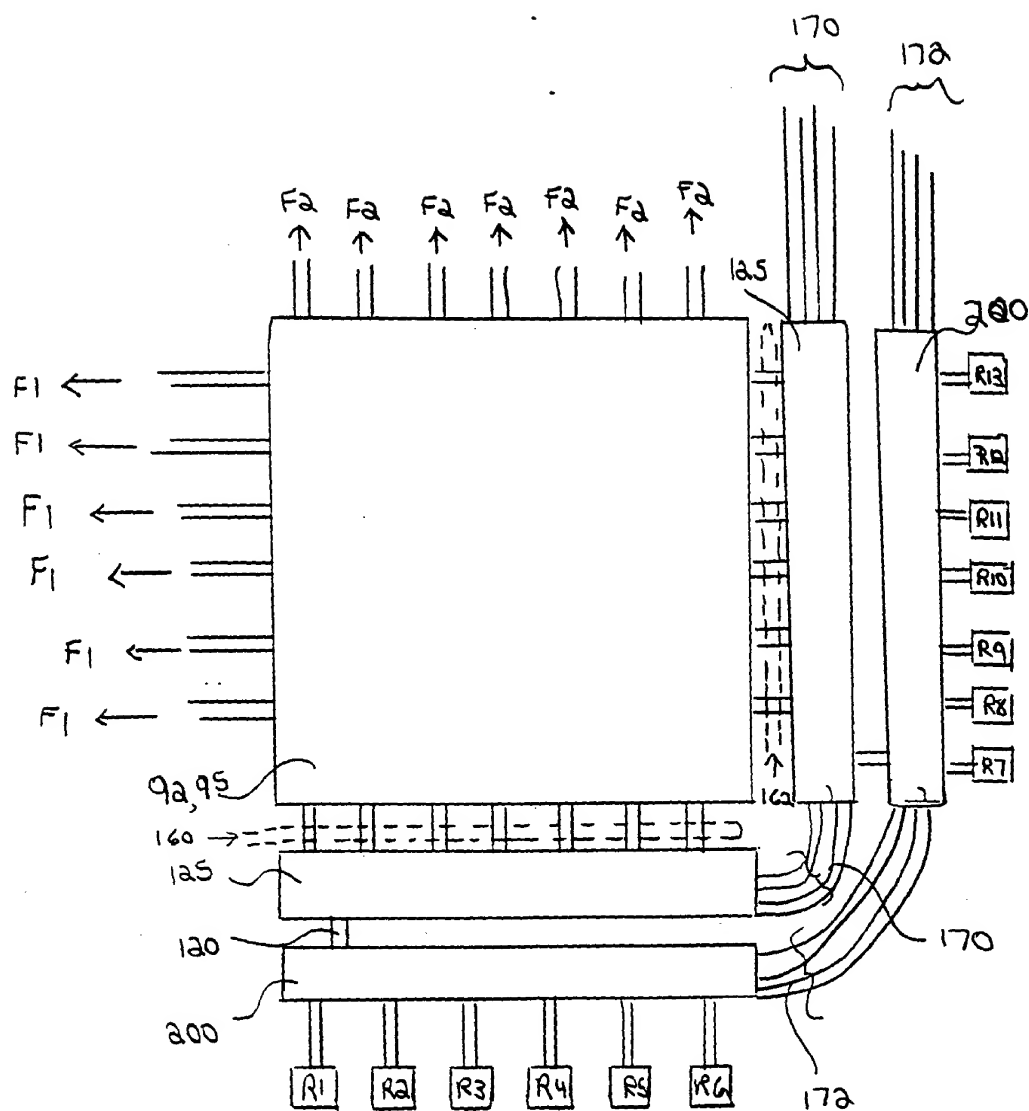
00901 2220260

FIG. 25



00907E-22260260

FIG 26





The diagram illustrates a microfluidic setup for single-molecule fluorescence spectroscopy. At the top, a **Syringe Pump** is connected to a **6-way valve**. The valve has five input lines from above, labeled **dATP**, **dTTP**, **dGTP**, **dCTP**, and **Buffer**. The output of the valve leads into a **Microfabricated silicon flow cell**, which is mounted on a **Glass cover slip**. A **Microscope Objective** is positioned below the flow cell to collect fluorescence. An **Nd:YAG Laser** provides an excitation beam that passes through a **Dichroic filter** and a **Barrier filter** before reaching the flow cell. The fluorescence signal is collected by the objective and detected by a **Photon Counting Camera**.

FIG 27